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PATENT SPECIFICATION

1,146,527

DRAWINGS ATTACHED.

1,146,527



Date of filing Complete Specification: 10 May, 1967.

Application Date: 11 May, 1966. No. 20953/66.

Complete Specification Published: 26 March, 1969.

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Index of Acceptance:—A4 S(1B 1H 1M 1N): E1 B(4BX 4F6C 4F6X 4G3 4HX): E2 AE21:

ERRATUM

SPECIFICATION NO. 1,146,527

Page 1, Heading Index at Acceptance:— for G4G read G5G

THE PATENT OFFICE,  
30th April 1969

D 113638/25

SPECIFICATION NO. 1,146,527

INVENTOR: JOSEPHINA ALYS BANNER

By a direction given under Section 17 (1) of the Patents Act 1949 this application proceeded in the name of MARIAN LINDKVIST, a British Subject of The Small House, Vine Road, London, S.W.13.

THE PATENT OFFICE

D 118962/11

20 adjacent units may be distinguished by touch or feel. Thus a blind person can tell his approximate position by the feel of the floor covering under his feet.

25 The various units may be subdivided into separate sections of distinctive texture or patterning with applied strips of distinctive feel between the sections.

The units may be laced together so that they can be taken apart for storage purposes.

30 Specific constructions of a floor covering embodying the invention will now be described, by way of example, and with reference to the drawings (Figures 1 to 6) accompanying the Provisional Specification and 35 the accompanying drawings (Figures 7 and 8) in which:—

Figure 1 is a diagrammatic plan view of a floor covering made in a textile fabric.

40 Figure 2 is a diagrammatic representation showing the manner in which the floor covering is assembled.

like. It is designed and constructed so that a blind person having familiarised himself or herself with the arrangement and layout of the floor covering, can, by the feel of the surface of the floor covering under his feet assess his approximate position on the floor covering and thus his approximate position within the room in which the floor covering is being used.

45 In the example shown in Figures 1 to 3, 7 and 8, the floor covering comprises a carpet base made of a suitable textile fabric such as is used for the manufacture of carpets or the like. The surface of the carpet base is divided into a number of sections, each section having a distinctive pattern and texture so that a blind person can identify by feel or touch any one section.

50 The floor covering, in this example, is rectangular (see Figure 1) and is divided into four detachable quarters 11, 12, 13, 14 75 constituting the aforementioned units, each unit comprising three distinctive sections.

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Index at Acceptance:—A4 S(1B, 1H, 1M, 1N); E1 B(4EX, 4F6C, 4F6X, 4G3, 4HX); E2 AE21; E2 B13A3; G4 G6.

Int. Cl.:—A 47 g 27/02.

## COMPLETE SPECIFICATION.

### Improvements in or relating to Floor Coverings.

I, JOSEPHINA ALYS BANNER, a British Subject, of The Bield, Little Langdale, Ambleside, Westmorland, do hereby declare the invention, for which I pray that a patent 5 may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to floor coverings or 10 the like, and, more particularly to floor coverings for use by the blind.

The present invention provides a floor 15 covering for assisting blind persons to assess their location comprising a plurality of units joined together along radial lines from a centre point, adjacent units being differentiated with distinctive raised patterning over the whole surface of each unit by which adjacent units may be distinguished by touch 20 or feel. Thus a blind person can tell his approximate position by the feel of the floor covering under his feet.

The various units may be subdivided into 25 separate sections of distinctive texture or patterning with applied strips of distinctive feel between the sections.

The units may be laced together so that 30 they can be taken apart for storage purposes.

Specific constructions of a floor covering 35 embodying the invention will now be described, by way of example, and with reference to the drawings (Figures 1 to 6) accompanying the Provisional Specification and the accompanying drawings (Figures 7 and 8) in which:—

Figure 1 is a diagrammatic plan view of a floor covering made in a textile fabric.

Figure 2 is a diagrammatic representation 40 showing the manner in which the floor covering is assembled,

Figure 3 is a diagrammatic plan view of a part of the floor covering.

Figure 4 is a diagrammatic plan view of a floor covering of synthetic plastics 45 material,

Figure 5 is a diagrammatic representation of a part of the floor covering of Figure 4,

Figure 6 is a diagrammatic representation of a part for a floor covering made in a synthetic plastics material, 50

Figure 7 is a diagrammatic plan view of part of a modification of the floor covering shown in Figures 1 to 3, and

Figure 8 is a diagrammatic plan view of part of another modification of the floor covering shown in Figures 1 to 3. 55

The floor covering is intended to be used by the blind in institutions, schools and the like. It is designed and constructed so that a blind person having familiarised himself or herself with the arrangement and layout of the floor covering, can, by the feel of the surface of the floor covering under his feet assess his approximate position on the floor covering and thus his approximate position within the room in which the floor covering is being used. 60

In the example shown in Figures 1 to 3, 7 and 8, the floor covering comprises a carpet base made of a suitable textile fabric such as is used for the manufacture of carpets or the like. The surface of the carpet base is divided into a number of sections, each section having a distinctive pattern and texture so that a blind person can identify by feel or touch any one section. 65

The floor covering, in this example, is 70 rectangular (see Figure 1) and is divided into four detachable quarters 11, 12, 13, 14 constituting the aforementioned units, each unit comprising three distinctive sections. 75

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When the floor covering is not in use it can be dismantled into its four separate quarters and conveniently stored. Each quarter is edged around its perimeter with soft leather binding 15 which is punctured with a number of eyelets 16 which are used to lace the four quarters together to form the united floor covering.

The method of joining the four quarters, 10 11, 12, 13, and 14 to form the united floor covering is shown in Figures 2 and 3.

The four quarters 11, 12, 13 and 14 are arranged to form the united floor covering (see Figure 1) and are joined together by 15 lacing each internal edge of each quarter to the internal edge of the adjacent quarter by means of the eyelets 16 in the soft leather binding 15.

The joining of the internal edges is 20 strengthened by means of four canvas strips, one of which is shown in Figure 3. Each canvas strip is provided with stud-holes 32 spaced in pairs along the length of the strip. In addition to the eyelets 16 the leather binding 15 has, on its underside, press studs 33 spaced at intervals corresponding to the distance between each pair of stud-holes 32. In this example the stud-holes 32 and press stud 33 are arranged at intervals of 9 inches 30 to 1 foot.

Figure 2 shows the underside of an internal leather bound edge 38 of one quarter and part of one half of a canvas strip 39. Each canvas strip is arranged under each 35 adjacent pair of internal edges, 34, 35, 36 and 37 and the press studs 33 on the leather bound edge of each quarter are locked in the stud-holes 32 on each canvas strip. Thus each canvas strip provides additional security to the pins between the adjacent quarters.

The floor covering, in this example, is divided into twelve sections. This is achieved by attaching to the surface of the floor covering a circle 17 of soft white piping and surrounding the circle 17 with an ellipse 18 also of soft white piping spaced at a convenient distance from the circle 17. In this example the soft white piping from which the circle 17 and ellipse 18 are made is  $\frac{1}{2}$ " thick. Each quarter is thus divided into 45 three sections there being a total of twelve sections on the complete floor covering. On to the surface of each of these twelve sections is woven a different raised pattern having a distinctive shape and feel which renders any one section easily recognisable by touch.

In this example each quarter has been 60 given a distinctive pattern which is varied in each of the three sections contained in each quarter.

The quarter 11 has a disc pattern which is of different size in each of the three sections. The quarter 12 has a wave pattern.

The quarter 13 a ray pattern and the quarter 14 a leaf pattern, all of which are varied in size and shape in each of the three sections contained in the respective quarter.

Where the floor covering is to be used with seeing instructors it is convenient to have the patterns in each section further characterised by a colour. Therefore, the patterns in each section are woven in material of the colours listed below.

Quarter 11,	Inner Section 20	light red	
	Middle Section 21	red	
	Outer Section 22	middle red	
Quarter 12,	Inner Section 23	light blue	
	Middle Section 24	blue	80
	Outer Section 25	middle blue	
Quarter 13,	Inner Section 26	orange	
	Middle Section 27	Gold	
	Outer Section 28	yellow	
Quarter 14,	Inner Section 29	light green	85
	Middle Section 30	green	
	Outer Section 31	middle green	

The circle 17 and ellipse 18 provide the means which divides each quarter into its three sections. It will be appreciated that a blind person will readily learn to distinguish the greater curvature of the circle 17 from the lesser curvature of the ellipse 18 and thus, the circle 17 and ellipse 18 are instrumental together with the distinctive pattern within each section in helping a blind person to find his position on the floor covering.

Figure 4 shows another example of a floor covering which is made in a synthetic plastics material. In this example the floor covering comprises four quarters 40, 41, 42 and 43 made of cast resin having a filler and backed with fibre glass.

The division of the floor covering into 105 twelve sections and the pattern arrangement within each section is the same as for the floor covering made in a textile fabric. Each quarter comprises a base portion 48 (see Figure 5) on to which is integrally moulded 110 a raised pattern 47. In this example the raised pattern 47 extend approximately  $\frac{1}{8}$ " above the surface of the floor covering.

A circle 44 and ellipse 45 are also moulded into the surface of the floor covering. 115 The circle 44 and ellipse 45 comprise raised tubular mouldings which again can be identified by feel or touch.

The four quarters 40, 41, 42 and 43 are arranged to form the united floor covering 120 (see Figure 4). Each adjacent pair of internal edges of each quarter are stepped along their edges so that each pair of adjacent edges can fit one upon the other.

Figure 5 shows the manner in which the 125 two fibre glass quarters 42 and 43 are joined together.

The adjacent edges 51, 52 of the quarters

42 and 43 are stepped or rebated on the top and bottom sides respectively so that the edges 51, 52 fit one upon the other. They are joined together and held in contact with the floor by means of link members (See Figure 6). Each link member extends through the holes 53 in the lower stepped edge into a depression of the underside of the upper stepped edge 52.

10 A stud 54 on the link member is held in the manner of a press stud in the depression on the underside of the upper stepped edge 52. The link member is held in contact with the floor by means of a rubber suction pad 55 on the base of the link member. The link members thus provide a means of holding the four quarters 40, 41, 42 and 43 together in a united floor covering and, at the same time, hold the floor covering in firm contact with the floor thereby preventing the floor covering from sliding across the floor.

15 The floor covering, in both examples, must, for reasons of safety, have a non-slippery surface. This is particularly important where the floor covering is made of a synthetic plastics material.

20 In the aforementioned examples the size of each quarter is 8 feet by 4 feet 6 inches making a united floor covering of 16 feet by 9 feet. It will be appreciated that by dividing the floor covering into four quarters of small manageable size the floor covering may be easily assembled and dismantled by both children and adults.

25 Figures 7 and 8 illustrate modifications of the example of floor covering shown in Figures 1 to 3 in which perpendicular runways are provided respectively across the middle of the width and length of the floor covering. The runway along the length is, in these examples, 1 foot wide and the runway across the width is 9 inches wide in the example shown in Figure 7. The runway is provided by a cross-shaped canvas strip 61 with eyelet holes 62 through which the strip is laced as at 63 to the leather bound edges of the four quarters. Additional security from further canvas strips with press studs on each side of the stitching underneath the floor covering may be provided as in the example described with reference to Figures 1 to 3.

30 In the example shown in Figure 8, the runways are formed by providing at least the innermost two adjacent edges of each of the four quarters with a half-runway width of canvas, 64, 65, 66, 67. This canvas may, for example, form part of a backing on which the quarters with the raised patterns are stitched. The innermost edges of these half runway widths of canvas 64 to 67 are provided with eyelet holes 68, through which the four quarters are laced together, as at 69.

35 The runways provide further sections

distinguishable by feel from the other distinctive sections of the covering and are found to be particularly helpful to, for example, blind children playing on the floor covering. The provision of the runways further assists in facilitating folding up the floor covering for storage.

70 The invention is not restricted to the details of the aforementioned examples.

75 For instance, the floor covering can be made in different sizes appropriate for use in, for example, playpens for blind infants, gymnasiums or dance floors.

#### WHAT I CLAIM IS:—

1. A floor covering for assisting blind persons to assess their location comprising a plurality of units joined together along radial lines from a centre point, adjacent units being differentiated with distinctive raised patterning over the whole surface of each unit by which adjacent units may be distinguished by touch or feel. 80

2. A floor covering as claimed in claim 1, in which the units are laced together.

3. A floor covering as claimed in claim 1 or claim 2, in which edging strips of distinctive feel are provided on the units whereby the radial lines can be felt. 90

4. A floor covering as claimed in any of the preceding claims in which four rectangular units of substantially equal size are joined together. 95

5. A floor covering as claimed in any of the preceding claims in which each unit contains two or more sections of distinctive patterning or texture with applied strips of distinctive feel between the sections. 100

6. A floor covering as claimed in claim 5 and in which said applied strips divide each unit into inner and outer portions of 105 distinctive patterning.

7. A floor covering as claimed in claim 6, in which said applied strips form a circle about the centre point.

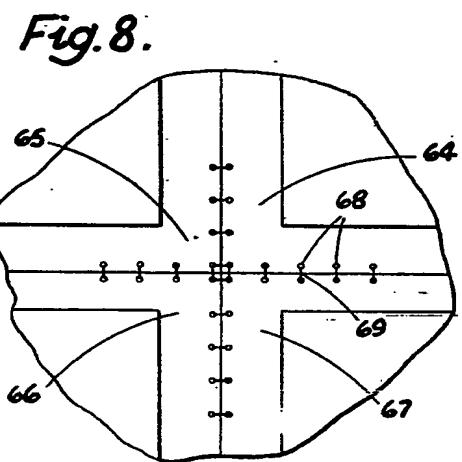
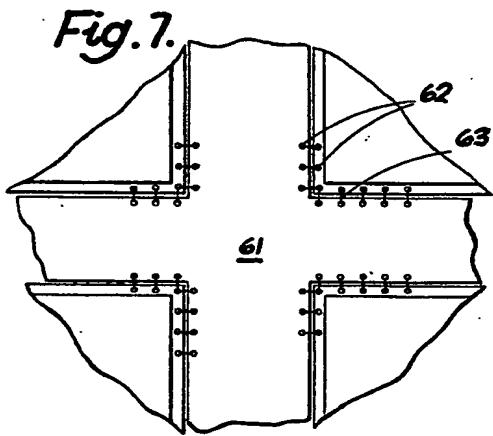
8. A floor covering as claimed in claim 7 in which further applied strips form an ellipse centred on the centre point and lying outside said circle. 110

9. A floor covering substantially as hereinbefore described with reference to, and illustrated in Figures 1 to 3, or Figures 4 to 6 of the drawings accompanying the Provisional Specification. 115

10. A floor covering substantially as hereinbefore described with reference to, and illustrated in, the drawings (Figures 7 and 8) accompanying this Complete Specification. 120

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London, E.C.1.  
Chartered Patent Agents,  
Agents for the Applicant.

1146527      COMPLETE SPECIFICATION  
1 SHEET      *This drawing is a reproduction of  
the Original on a reduced scale*



1146527

PROVISIONAL SPECIFICATION

3 SHEETS

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Sheet 1

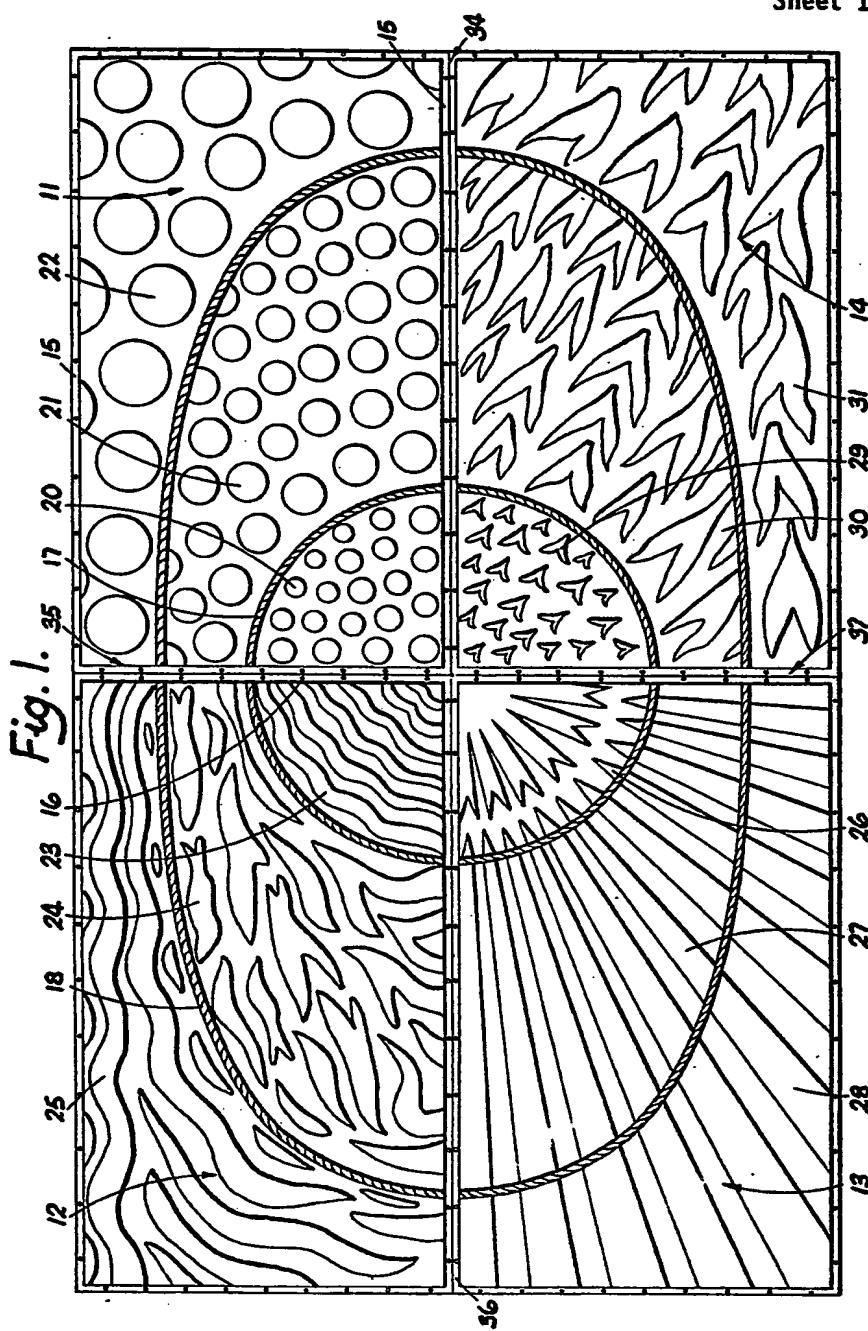


Fig. 2.

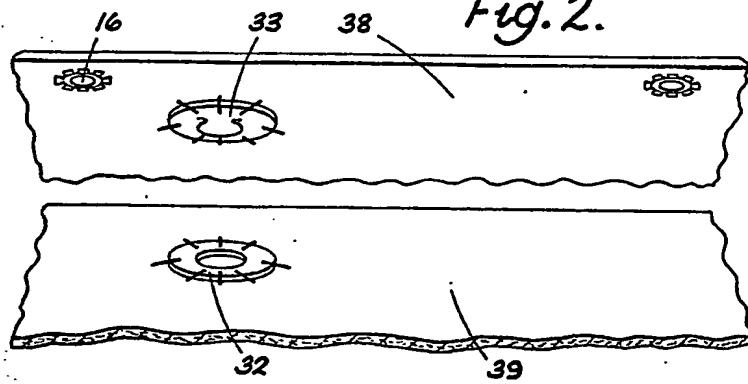


Fig. 3.

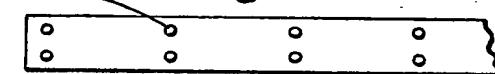


Fig. 5.

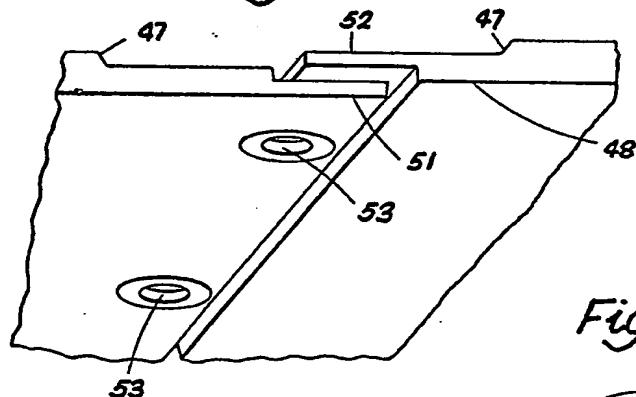
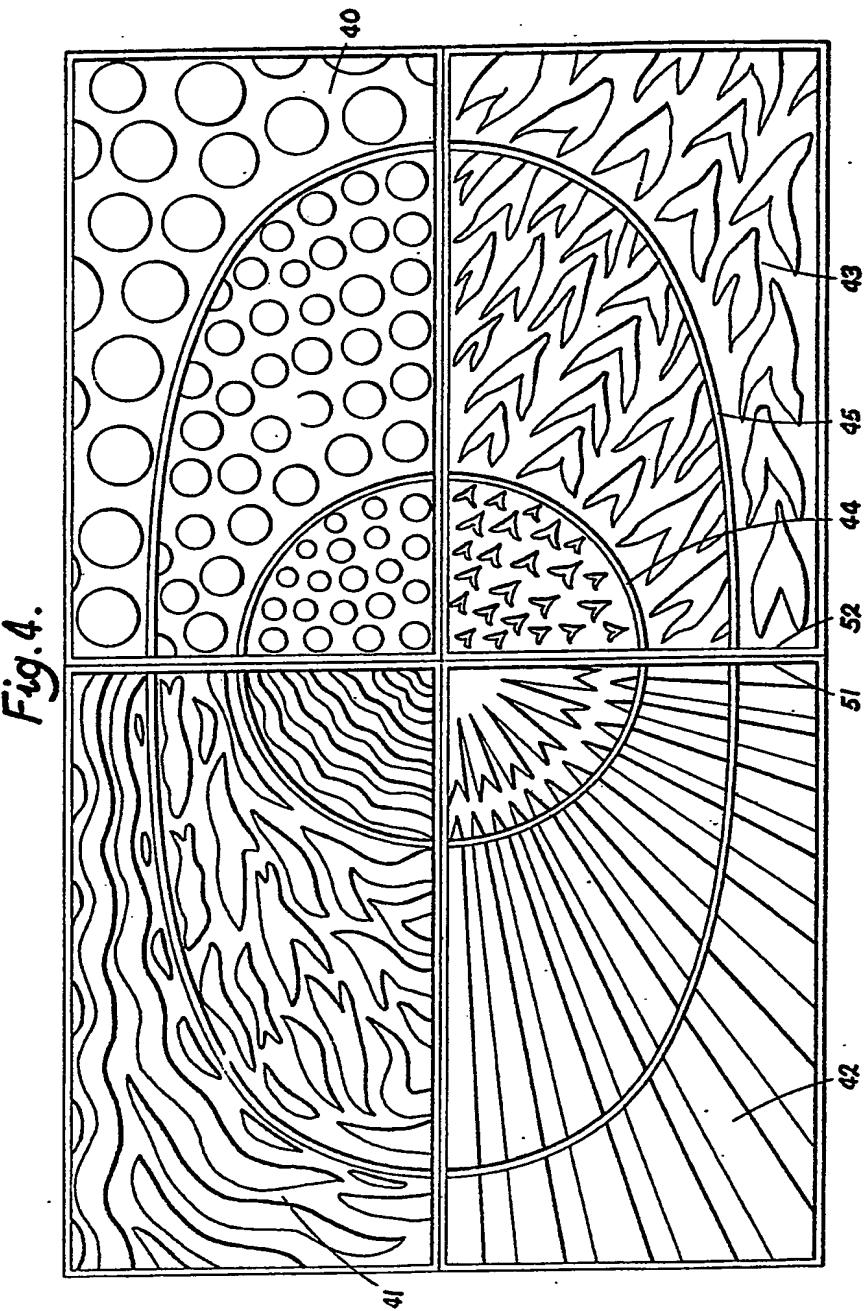


Fig. 6.



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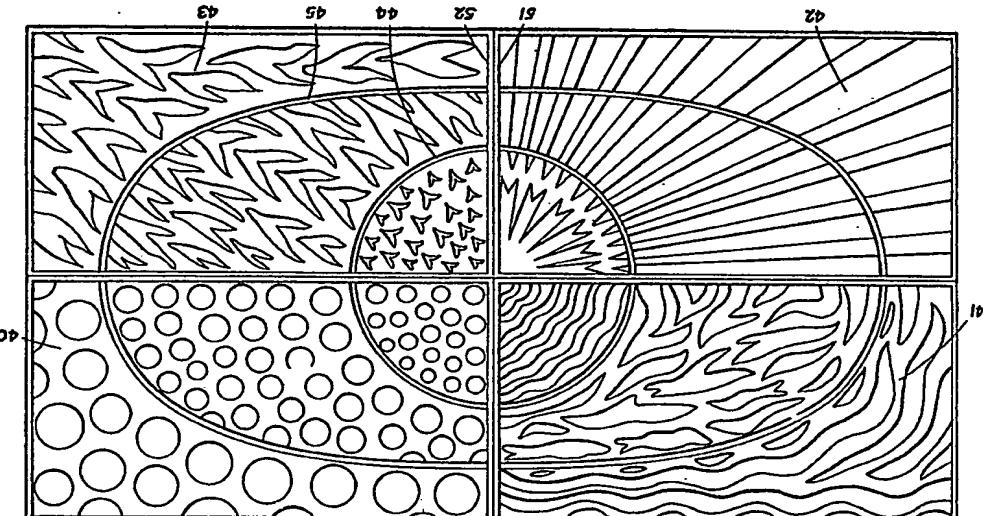


Fig. 4.

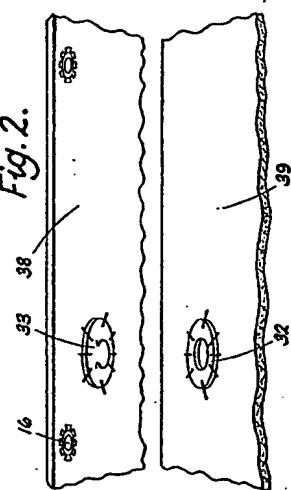


Fig. 2.

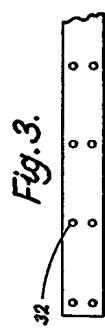


Fig. 3.

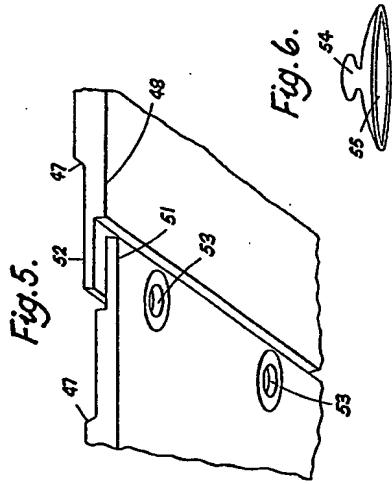


Fig. 5.

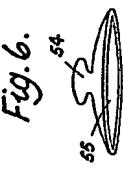


Fig. 6.

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